A Population-Based Study of the Prevalence and Distinctiveness of Battering, Physical Assault, and Sexual Assault in Intimate Relationships

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*****Note: Figures may be missing from this format of the document**

Abstract:

The types of violence subsumed under the term intimate partner violence include physical assault, sexual assault, psychological abuse, and battering. This study is the first to estimate the prevalence of intimate partner violence by type (battering, physical assaults, and sexual assaults) in a population-based sample of women aged 18 to 45. The authors describe the prevalence of partner violence by type as well as the demographic, health behavior, and health status correlates of intimate partner violence by type. Findings support the empirical distinction of battering and assault. Battering as measured by the Women's Experiences With Battering (WEB) Scale provided the most comprehensive measure of intimate partner violence.

Article:

The term intimate partner violence is increasingly used to represent the multiple types of violence women experience in their intimate relationships (Crowell & Burgess, 1996; Saltzman, Fanslow, McMahon, & Shelley, 1999). Recent conceptual work suggests that the types of violence subsumed under this label may be more variable than previously thought, including not only physical assault but also sexual assault, psychological abuse, and battering (Basile, 1999; Campbell & Soeken, 1999; Coker, Smith, Bethea, King, & McKeown, 2000; Coker, Smith, McKeown, & King, 2000; Mahoney, 1999; Smith, Smith, & Earp, 1999; Smith, Tessaro, & Earp, 1995; Tjaden & Thoennes, 2000).

Prior research with battered women suggests that battering is a chronic, continuous phenomenon that is conceptually distinct from episodic discrete acts of physical assault. Ferraro and Johnson's (1983) research with battered women revealed a process of victimization that was "not synonymous with experiencing violent attacks from a spouse" (p. 336). In their study, they found that battering had an "emotional career" that incorporated women's subjective perceptions of their experience, including feelings of shame and guilt; vacillation between fear and affection; loss of hope, love, and intimacy; and increasing loneliness and pessimism.

Johnson (1995) conceptualized two forms of intimate partner violence: intimate (formerly patriarchal) terrorism and common couple violence. He defined intimate terrorism as a form of terroristic control of wives by their husbands that involves the systematic use of not only physical violence but also economic subordination, threats, isolation, and other control tactics. Furthermore, he argued that this type of violence emerged from patriarchy and was characterized by male perpetrators and female victims. He distinguished this form of intimate partner violence from what he termed "common couple violence," defined as a less gendered phenomenon in which conflict between partners occasionally gets "out of hand," leading usually to minor forms of violence and only occasionally escalating into serious, sometimes even life-threatening, forms of violence. He posited that this form of violence has both male and female victims and perpetrators.

Our own research with battered women (Smith et al., 1999; Smith, Tessaro, et al., 1995) revealed battering to be an enduring, traumatic, and complex experience that continuously shapes battered women's behavior, their views of self, and their beliefs in the controllability of their own lives. We conceptualized this complexity using

the Women's Experiences With Battering (WEB) framework, extensively described elsewhere (Smith, Earp, & DeVellis,1995; Smith, Tessaro, et al., 1995). The WEB Framework postulates six domains of the battering experience: perceived threat, managing, yearning, altered identity, entrapment, and disempowerment. In essence, we found that battering is characterized by women's persistent feelings of susceptibility to future harm; use of multiple forms of intrapsychic and overt action in an effort to minimize harm or loss; yearning, often futilely, for intimacy; development of an increasingly negative self-concept based on the batterer's reflected negative images; increasing entrapment in the relationship; and, finally, women's growing disempowerment as the sustained exposure leads to a modification of thoughts, feelings, and behaviors. The following quotes from battered women illustrate this complex experience:

It's fear and terror. Loss of self-confidence. Made to feel like shit. That you're unworthy of anything.

That you're useless.

To batter someone is like putting a child in daycare ... You have people watching over you, telling you when you can get books, telling you when you can take naps and telling you when you should take potty breaks ... Being a child in a daycare as being hovered over by someone who thinks he's god. [I'm battered] because I'm a child in a daycare, I'm in his world under his rules, under his direction, and it has allowed me to not be the person—my own person, so to speak. When somebody takes you from being your own individual, you're being battered. (Smith, Edwards, & DeVellis, 1998)

The WEB conceptualization, which focuses on battered women's psychological experience, leads us to define battering as follows:

a process whereby one member of an intimate relationship experiences vulnerability, loss of power and control, and entrapment as a consequence of the other member's exercise of power through the patterned use of physical, sexual, psychological, and/or moral force. (Smith et al., 1998)

Examining the psychological experience of being battered, as well as the violent behavior itself, provides a more complete picture of battering than would looking at either alone.

The WEB definition builds on Agudelo's (1992) conceptualization of violence as an "exercise of power" expressed through different kinds of aggression or force that may include, but is not limited to, physical or sexual assault. This definition is consistent with Pence and Paymar's (1986) "power and control" conceptualization, which recognizes that battering consists of a variety of abusive tactics including physically assaulting women; threatening, intimidating, and humiliating them; isolating them and restricting their access to resources; threatening the safety of their children and others in their families; controlling women's activities outside the home; and using sex as a weapon by both forcing and withholding it. The WEB conceptualization also addresses Skogan's (1981) concerns that discrete event approaches to defining battering tend to remove violent events from their social contexts and hence do not fully capture its continuous character (Smith, Earp, et al., 1995). The WEB definition of battering also suggests that some battered women may not experience concurrent physical or sexual assault. Similarly, women may report physical or sexual assaults in their intimate relationships without experiencing the vulnerability, loss of power and control, and feelings of entrapment that characterize battering.

The National Research Council's Panel on Research on Violence Against Women (Crowell & Burgess, 1996) calls for studies that assess multiple types of violence against women from the same sample. In response to this call, we examine the prevalence and co-occurrence of different types of intimate partner violence (battering, physical assault, and sexual assault) in a population- based sample. In the present study, we also examine sociodemographic correlates and health status indicators associated with each of these types. To our knowledge, only one other published study using a clinical sample (Coker, Smith, Bethea, et al., 2000; Coker, Smith, McKeown, et al., 2000) has investigated the prevalence of battering as a type of intimate partner violence distinct from physical assault, along with both sexual and physical assault.

METHOD

SAMPLE

The sampling frame for this study was female registered voters between the ages of 18 and 45 residing in one North Carolina city. According to the 1990 census, there were 15,247 women aged 15 to 44 in this city; 65% were White and 34% were African American. We randomly selected 735 women and mailed them a self-administered, anonymous, six-page questionnaire, along with a cover letter describing the study as a "women's health study." The cover letter made no reference to intimate partner violence. We sent all participants a follow-up postcard 2 weeks after the initial mailing to increase our response rate. Informed consent was indicated by return of the questionnaire in accordance with the protocol approved by the human subject review committee of the University of North Carolina at Greensboro.

Of the 735 mailed surveys,112 (15.2%) were returned as undeliverable. Of the 623 questionnaires presumably received, 281 completed surveys were returned for a response rate of 45%. Because the survey was anonymous, we have no demographic data with which to characterize nonrespondents relative to respondents.

DEFINITIONS AND MEASURES

Women were asked about their current intimate relationship with a man. Those not currently in a relationship at the time of the study were instructed to consider their most recent intimate relationship. In this article, we use the term abused to refer collectively to the group of women who experienced any of the three forms of intimate partner violence (battering, physical assault, or sexual assault) and the term nonabused to refer to those women who did not experience any of the three forms.

Battering

We used the WEB Scale (Smith, Earp, et al., 1995; Smith, Smith, & Earp, 1999) to identify battered women. Respondents were asked to indicate their level of agreement or disagreement with 10 items, such as "He can scare me without laying a hand on me," "He makes me feel like I have no control over my life, no power, no protection," and "I feel ashamed of the things he does to me" (see Appendix). As reported elsewhere (Coker, Pope, Smith, Sanderson, & Hussey, 2001; Coker, Smith, Bethea, et al., 2000; Smith, Earp, et al., 1995; Smith et al., 1999), the WEB Scale has good construct validity, accurately discriminates battered from nonbattered women, and shows strong internal consistency reliability (Cronbach's alpha = 0.91 in the present study). The WEB Scale ranges from 10 to 60. The cutoff point of > 19 used to classify a woman as battered in this study was derived from a sensitivity and specificity analysis using the scale's development sample (Smith et al., 1995). This cut-point resulted in a sensitivity of 94.6% and a specificity of 96.1%.

Physical Assault

Following the Centers for Disease Control and Prevention's (CDC) recommended definitions, physically assaulted women are those whose partners have intentionally used physical force against them with the potential to cause death, disability, injury, or harm (Saltzman et al., 1999). The following item from the Abuse Assessment Screen (AAS) (McFarlane, Parker, Soeken, & Bullock, 1992), slightly modified to ask only about violence by the current or most recent male partner, was used to measure physical assault: "In the last year, how many times have you been hit, slapped, kicked, or otherwise physically hurt by your male partner (husband or boyfriend)?" Responses ranged from 0 (*no incidents*) to 5 (*five or more incidents in the past year*).

Sexual Assault

Also following CDC's recommended definition, we defined sexually assaulted women as those whose male partners forced them to have sexual activities against their will, whether or not the act was completed (Saltzman et al., 1999). An additional item from the AAS (McFarlane et al., 1992), also modified to ask only about violence by the current or most recent male partner, was used to measure sexual assault: "In the last year, how many times have you been forced to have sexual activities by your male partner (husband or boyfriend)?" For women not currently in a relationship, the "last year" time reference in both the physical and sexual assault questions specified the last year of the relationship. Responses ranged from 0 (*no incidents*) to 5 (*five or more incidents in the past year*).

Social Support
In this study, we measured the women's social support in two ways: perceived social support and frequency of contact with family and friends. Perceived support from family and friends was measured with 7 items developed from a previously validated social support scale (Sarason, Levine, Basham, & Sarason, 1983). Respondents were asked how much (*a lot*, *some*, *a little*, *not at all*) they could count on their family and friends: to listen, give advice or information, tell them where they could get help, lend a hand, and help them feel relaxed when under pressure. Alpha for this scale in the current study was .89. We also included separate items to measure the frequency with which women had contact (saw, wrote, or talked) with family or friends and how often they received help from members of their family.

Health Assessment
Perceived stress was assessed using the Perceived Stress Scale (Cohen, Kamarck, & Mermelstein, 1983), a 14-item, self-report measure that assesses the degree to which situations during the last month are appraised as stressful. Items were rated on a 5-point, Likert-type scale from 0 (*never*) to 4 (*very often*). The alpha in this study was .89. We used the 4 T-ACE questions to measure problem drinking (Sokol, Martier, & Ager,1989),1 item from the Medical Outcomes Study (MOS) to measure perceived health status, and 2 items (combined) from the MOS to measure role functioning (Stewart, Hays, & Ware, 1988). We developed items measuring frequency of doctor and hospital visits in the past year, likelihood of going to the doctor for checkups when not sick, frequency of breast self-exam, time since last Pap smear, and current smoking behavior.

To assess health problems, we asked respondents whether they currently or had ever had frequent urinary tract infections, frequent vaginal yeast infections, and / or sexually transmitted infections (i.e., herpes simplex, chlamydia infection, genital warts, gonorrhea, HIV/AIDS, syphilis). We also asked whether respondents currently had or had within the past year unexplained bleeding, irregular menstrual periods, severe cramping during menstruation, pain lasting 6 months or more, abdominal pain, pelvic pain, backache, severe constipation, or unexplained vomiting. Additional items assessed history of diabetes, asthma, heart disease, high blood pressure, kidney disease, and cancer, but frequencies for these conditions were too low to sustain statistical analysis.

Demographics
Finally, we asked women a series of questions to determine whether they had ever been in a relationship with a man, how many times they had been married, their current marital status, their employment status, age, educational attainment, number of children, total family income, and religiosity.

ANALYSIS
We excluded 13 women from the analysis because they had never been in an intimate relationship with a man (N =12) or they provided insufficient data to calculate scores on the intimate partner violence items (N = 1). One additional woman failed to provide sufficient data to calculate the WEB score, and another failed to provide sexual assault information. Thus, the effective sample size for most analyses was 268 or fewer. We used logistic regression to explore demographic correlates of intimate partner violence by type. In three separate sets of models, we determined the odds of being battered, physically assaulted, or sexually assaulted versus the odds of experiencing no form of intimate partner violence (i.e., being a nonabused woman). For these analyses, we used dichotomized dependent variables. A woman was classified as: battered if her WEB Scale score was greater than 19; physically assaulted if she indicated being assaulted at least once; and sexually assaulted if she indicated being forced into sexual activities at least once. The reference group for each model was generally the one with the lowest probability of intimate partner violence.

We used Kendall's tau-b, a nonparametric correlation measure based on counts of concordant and discordant pairs of variable ranks, to assess the association between intimate partner violence measures and health behavior and health status indicators. Kendall's tau was chosen over Pearson's product-moment correlation because of the ordinal nature of the physical and sexual assault items. We chose Kendall's tau over Spearman's rho because Kendall's tau is an unbiased statistic (Arndt, Turvey, & Andreasen, 1999) with a more straightforward

interpretation than Spearman's rho (Conover, 1999, p. 319; see also Arndt et al., 1999). For analysis of the health variables, the intimate partner violence measures were used in their original form rather than

TABLE 1
Prevalence and Co-Occurrence of Intimate Partner Violence by Type for Current or Most Recent Relationship

Type of Violence	*Number*	*Prevalence*
Any type (battering, physical assault, or sexual assault)	49	18.4
Battering	35	13.1
Psychological battering	16	6.0
Physical assault	23	8.6
Physical assault only	5	1.9
Sexual assault	22	8.2
Sexual assault only	3	1.1
Battering and sexual assault	7	2.6
Battering and physical assault	6	2.3
Sexual assault and physical assault	6	2.3
Battering and physical assault and sexual assault	6	2.3

being dichotomized. The tau statistic has a potential range from +1 for a perfect positive correlation to –1 for a perfect negative correlation.

RESULTS

PREVALENCE OF INTIMATE PARTNER VIOLENCE

In this population-based sample, 18.4% of the women self-reported some type of intimate partner violence in their current or most recent relationship with a male partner: 13.5% reported battering, 8.6% reported physical assaults, 8.2% reported sexual assaults, and 6.0% reported battering without physical or sexual assault (see Table 1). We use the term psychological battering to refer to a subset of battered women who were not concurrently being physically or sexually assaulted. As indicated by their responses on the WEB Scale and the AAS, psychologically battered women's experience of psychological vulnerability (i.e., loss of power and control, entrapment, and disempowerment) resulted from their partner's exercise of power through the patterned use of aggressive, coercive, threatening, and/or controlling behaviors other than physical or sexual assault.

We found both differentiation and co-occurrence between the three types of intimate partner violence. Overall correlations between the three measures of battering, physical assault, and sexual assault were modest but statistically significant: the Kendall's tau-b correlation between WEB score and frequency of physical assault was 0.29 ($p < 0.001$), between WEB score and frequency of sexual assault was 0.29 ($p < 0.001$), and between physical and sexual assault was 0.49 ($p < 0.001$). Altogether, 54% of the battered women were also physically or sexually assaulted within the past year. Of the women who were physically or sexually assaulted, 70% were also battered. Physical assault and sexual assault usually co-occurred with another type of intimate partner violence.

As indicated by the data in Table 2, neither the WEB Scale nor the AAS could, if used alone, identify all the women experiencing intimate partner violence. The WEB Scale correctly identified as abused 71% of all women experiencing any form of intimate partner violence. The two AAS items measuring physical and sexual assault correctly identified 66% of the abused women; the physical assault item alone correctly identified almost 47%, and the sexual assault item alone identified almost 45%. In addition, the WEB Scale cannot identify whether battered women are assaulted, and the AAS cannot identify whether assaulted women are battered.

DEMOGRAPHIC ASSOCIATIONS

Table 3 summarizes the prevalence of intimate partner violence by demographic characteristics. Table 4 presents the odds ratios for women in different demographic groups experiencing battering, physical assault, and sexual assault. Women who were single, separated/ divorced, formerly in a relationship, or working full-time or part-time were more likely to be battered, as were women with lower family incomes. In addition, the relationship between battering and having less education was close to significant at a = .05, with a 95% confidence interval of .99 to 2.31. Younger, African American, and separated/ divorced women were more likely to have experienced physical assault by a partner. Having less education and lower family income were also associated with physical assault. Women who were formerly in a relationship, single, or separated /divorced were more likely to have been sexually assaulted by a male partner. Lower education levels and lower family income were also associated with experiencing sexual assault.

TABLE 2
Number and Percentage of Women (*N* = 267) Experiencing Different Types of Intimate Partner Violence

Instrument	*Number of Women Identified as Abused*	*Percentage of All Abused Women*	*Percentage of All Battered Women*	*Percentage of All Physically Assaulted Women*	*Percentage of All Sexually Assaulted Women*
WEB Scale (battering)	35	71%	100%	52%	59%
Abuse Assessment Screen	33	66%	54%	100%	100%
Physical assault item only	23	46.9%	34%	100%	54%
Sexual assault item only	22	44.9%	37%	52%	100%

NOTE: WEB = Women's Experiences With Battering.

TABLE 3
Prevalence of Intimate Partner Violence by Demographic Characteristics

	Sample Size	*Battered*[a]	*Physical Assault*	*Sexual Assault*
All women[b]	269	13.11%	8.58%	8.24%
Age				
18 to 25	64	15.63%	14.06%	7.94%
26 to 35	114	12.39%	9.65%	7.89%
36 to 45	90	12.22%	3.33%	8.89%
Race				
White	225	12.44%	6.22%	7.14%
African American	39	15.79%	23.08%	15.38%
Relationship status				
Current partner	228	10.57%	8.77%	6.58%
Former partner	39	28.21%	7.69%	18.42%
Marital status				
Never married	74	18.92%	12.16%	12.33%
Married	176	9.14%	5.68%	4.55%
Separated/divorced	18	27.78%	22.22%	27.78%
Children				
No	114	11.50%	6.14%	4.42%
Yes	153	14.38%	9.80%	11.11%
Education				
No high school diploma	7	14.29%	28.57%	42.86%
High school graduate	57	19.64%	14.04%	14.04%
Some college/A.A. degree	94	13.83%	7.45%	5.32%
College or graduate school	109	9.17%	5.50%	5.56%
Employment				
Full-time/part-time	183	15.85%	9.29%	9.34%
Student	33	12.12%	9.09%	6.06%
Homemaker/unemployed	52	3.92%	5.77%	5.77%
Income				
Less than $12,000	19	33.33%	31.58%	21.05%
$12,000 to $24,999	43	20.93%	13.95%	21.43%
$25,000 to $49,999	88	14.77%	10.23%	9.09%
$50,000 or more	114	6.14%	1.75%	0.88%

a. WEB score > 19.
b. All analyses exclude women never in a relationship with a man. Analysis of race excludes Latina and Asian women due to low sample size.

HEALTH STATUS INDICATORS

Independent of type, intimate partner violence was associated with negative health behaviors, poor health status, and being less likely to get regular health checkups (see Table 5). None of the three types of intimate partner violence, surprisingly, was associated with an increased number of doctor or hospital visits in the past year. This finding did not change when we excluded formerly abused women from the analyses or when we controlled

TABLE 4
Odds Ratios With 95% Confidence Intervals for IPV by Demographic Characteristics

	Battered [a]	*Physical Assault*	*Sexual Assault*
Younger women[b]	1.19 (0.74–1.91)	2.03 (1.11–3.71)*	0.98 (0.54–1.77)
African American women[c]	1.48 (0.56–3.91)	4.45 (1.76–11.28)*	2.60 (0.94–7.21)
Currently not in relationship[d]	3.50 (1.53–8.00)*	1.15 (0.32–4.14)	3.57 (1.33–9.59)*
Marital status[e]			
Having never been married	2.48 (1.14–5.42)*	2.55 (0.98–6.61)	3.19 (1.17–8.68)*
Being separated or divorced	4.78 (1.45–15.73)*	6.12 (1.63–23.01)*	9.56 (2.64–34.65)*
Having children[f]	1.29 (0.62–2.70)	1.64 (0.64–4.18)	2.60 (0.93–7.30)
Lower education level[g]	1.51 (0.99–2.31)	1.87 (1.14–3.07)*	2.09 (1.26–3.45)*
Employment[h]			
Full-time/Part-time	4.80 (1.10–20.88)*	1.88 (0.53–6.69)	1.88 (0.53–6.69)
Student	3.36 (0.58–19.53)	1.68 (0.32–8.89)	1.12 (0.18–7.11)
Lower income level[i]	2.04 (1.41–2.96)*	2.70 (1.72–4.23)*	2.91 (1.80–4.70)*

NOTE: IPV = intimate partner violence. All analyses exclude women never in a relationship with a man. Analysis of race excludes Latina and Asian women due to low sample size.
a. Web score > 19.
b. Age is coded as a three-level ordinal variable: ages 18 to 25, 26 to 35, and 36 to 45.
c. Reference group is White women.
d. Reference group is women currently in relationship with a male partner.
e. Reference group is married women.
f. Reference group is women who have no children.
g. Education is coded as a four-level ordinal variable: less than high school, high school diploma, some college/AA degree, and college degree or graduate school.
h. Reference group is homemaker/unemployed women.
i. Annual total family income is coded as a four-level ordinal variable: less than $12,000, $12,000 to $24,999, $25,000 to $49,999, and $50,000 or more.
* Indicates significance at $\alpha = .05$.

for income (data not shown). Furthermore, none of the three types was associated with increased likelihood of having a drinking problem.

Battering was not associated with any of the other health behaviors we measured; however, increased frequency of physical assault was associated with being less likely to have had a Pap smear within the past year, and both physical and sexual assault were associated with increased cigarette smoking.

All three forms of intimate partner violence were associated with indicators of negative health status. Battering was significantly associated with increased stress, having ever had a sexually transmitted disease, frequent urinary tract infections, gynecological problems in the past year, poor perceived health status, and increased role limitations. Increased frequency of physical assault was significantly associated with increased

TABLE 5
Kendall Tau Correlations Between Health Behaviors/ Problems and Battering, Physical Assault, and Sexual Assault

Health Problem	*Battering*[a]	*Physical Assault*[b]	*Sexual Assault*[c]
Health-seeking behaviors			
Likely to get regular checkups	−.108 *	−.172 **	−.145 *
Number of doctor visits (past year)	−.047	−.012	−.027
Number of hospital visits (past year)	−.017	.023	.068
Health behavior			
Perform monthly breast self-exam	−.074	.019	.054
Pap smear within past year	−.054	−.138 *	−.122
Smoking	.035	.149 *	.160 *
Drinking problem	.080	−.055	−.056
Social support			
Frequency of contact (family)	.000	.096	.050
Frequency of contact (friend)	−.038	.083	−.050
Frequency of family help	−.169 **	.151 *	.169 **
Perceived social support	−.241 ***	−.164 **	−.135 *
Health status indicators			
Stress scale	.248 ***	.177 **	.107 *
Sexually transmitted infection[d] (ever)	.155 **	.078	.025
Frequent urinary tract infections (ever)	.118 *	.122	.066
Frequent vaginal yeast infections (ever)	.074	.110	.097
Gynecological problems[e] (past year)	.158 **	.085	.075
Chronic pain[f] (past year)	.080	.197 **	.152 *
Perceived health status	−.141 **	−.183 **	−.085
Role limitations	.127 *	−.039	.048

a. Measured by the Women's Experiences With Battering Scale scored as a continuous variable ranging from 10 to 60.
b. Measured by the Abuse Assessment Screen physical abuse item scored from 0 to 5 or more incidents.
c. Measured by the Abuse Assessment Screen sexual abuse item ranging from 0 to 5 or more incidents.
d. Includes herpes, chlamydia, genital warts, gonorrhea, and syphilis.
e. Unexplained bleeding, irregular menstrual periods, severe cramping during menstruation.
f. Pain lasting 6 months or more, abdominal pain or pelvic pain.

stress, having had chronic pain in the past year, and lower perceived health status. Increased frequency of sexual assault was significantly associated with increased stress and having chronic pain in the past year. The only indicator of health status we measured that was not significantly associated with any indicators of abuse was frequent vaginal yeast infections. All three groups of abused women had similar levels of weekly contact with their family and friends as did nonabused women. However, all three groups of abused women also experienced less perceived support than their nonabused counterparts.

DISCUSSION

This is the first published community-based study to assess three types of intimate partner violence in the same sample of women, and it is one of the few published studies to look empirically at the distinctions between battering and physical assault (Coker, Smith, Bethea, et al., 2000; Coker, Smith, McKeown, et al., 2000). Our findings support the growing body of work indicating conceptual and empirical distinction between battering, physical assault, and sexual assault. We found (a) modest correlations between battering, physical assault, and sexual assault; (b) both distinctions between, and co-occurrence of, battering, physical assault, and sexual assault; (c) different demographic correlates of the three types of intimate partner violence; and (d) different health status and behavioral correlates of the three types of intimate partner violence. The modest correlations between the three types of intimate partner violence are consistent with somewhat different constructs, and the patterns of associations between the variables suggest discriminate validity.

Figure 1 is a conceptual depiction of our findings about the congruence of the three types of intimate partner violence. Our findings indicate that male partners can engage in abusive behaviors other than physical or sexual assault sufficient to create or sustain fear, provoke a loss of power and control, and induce shame and disempowerment in the relationship. Hence, we call this type of intimate partner violence psychological

battering. Furthermore, male partners can physically and sexually assault their partners in a context that does not instill the experience of battering. About half the battered women were psychologically battered, that is, were not concurrently (i.e., within the past 12 months) physically or sexually assaulted, as measured by the AAS. We cannot determine from these data, however, whether these battered women had or had not been physically or sexually assaulted sometime prior to that time. Similarly, about half the women who had been physically or sexually assaulted within the last 12 months were not battered, as measured by the WEB Scale. In addition, the three types of intimate partner violence often co-occurred, although only a small percentage (2.3%) reported experiencing all three.

Our findings that 18% of the women experienced some form of intimate partner violence in a current/most recent relationship—

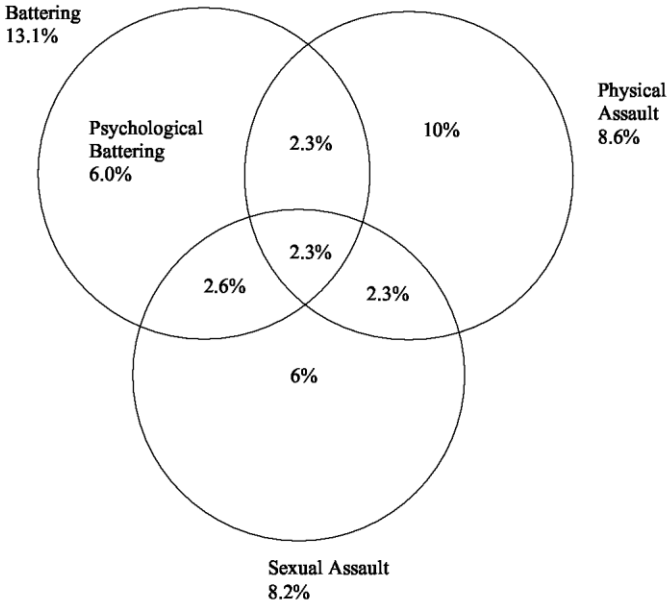

Figure 1: Conceptual Representation of the Relationships Between Battering, Physical Assault, and Sexual Assault: Proportion of Women Experiencing Different Types of Intimate Partner Violence

13% were battered, 9% were physically assaulted, 8% were sexually assaulted, and 6% were psychologically battered—are similar to those reported by Coker, Smith, McKeown, et al. (2000) in their study of intimate partner violence in a clinical population. They found that 20% experienced some form of intimate partner violence (battering, physical assault, sexual assault) in a current/most recent relationship; 17% were battered; 10% were physically assaulted; 8% were sexually assaulted; and 7.5% were psychologically battered.

The association we found between physical and sexual assault is also similar to that reported by Coker and colleagues (2000) as well as by Campbell and Soeken (1999). Coker's study, using a clinical sample, reported that about half of the physically assaulted women were also sexually assaulted (Coker, Smith, McKeown, et al., 2000). Campbell and Soeken's study, using a convenience sample of largely low-income African American (76%) women, found that about half of those physically assaulted were also sexually assaulted. On the other hand, our findings on the prevalence of physical and sexual assault are much higher than those reported in the 1995-1996 National Violence Against Women Survey (NVAWS). In the NVAWS, only 1.3% of the women aged 18 to 80-plus reported being physically assaulted, and .02% reported being sexually assaulted by a current intimate partner within the last 12 months (Tjaden & Thonnes, 2000). Their sample, unlike ours, however, included women older than age 45 who may have lower rates of intimate partner violence (Mezer, Post, & Maxwell, 2001).

Our data do not allow us to clearly interpret the meaning and context for physical or sexual assault that occurs independent of battering. It is difficult to draw meaningful conclusions in the absence of research on the

"natural history" of intimate partner violence in its multiple forms. It is also difficult to draw conclusions because we have no information on men who perpetrated the abuse. It is possible that the differences seen in the women are a function of the differences in the men who perpetrate the abuse.

Assaulted but not battered women could be women who might later in life be battered if the assaults persisted. In support of this interpretation are our data that indicate assaulted women are younger than battered women. Most of our findings on the correlations between demographics and abuse status, however, do not support this interpretation. Other than their greater likelihood to be separated or divorced, the only demographic factors common across all three categories of intimate partner violence were lower family income and decreased educational level. Compared to nonabused women, physically assaulted women but not battered or sexually assaulted women were more likely to be African American and younger; battered and sexually assaulted women were more likely to have left their abusive partners and to have never been married; all abused women were more likely to be separated from their husbands (but not necessarily from their current partners). Battered but not sexually or physically assaulted women were more likely than nonabused women to be employed. The positive relationship between employment and battering remained significant even after controlling for relationship status. These findings suggest that different women may be at risk for different types of intimate relationship violence. It is striking that these differences were found given the relatively small sample size and the level of co-occurrence between battering, physical assault, and sexual assault.

In terms of the distinctiveness of battering and sexual assault, Basile's (1999) recent qualitative research with women who self-identified as having experienced unwanted sex with a husband or intimate partner suggested there are multiple contexts within which these experiences occur. In her study, 17 of the 41 women interviewed described sexually coercive situations that did not involve verbal bullying, physical force, and/or threats of force. Basile described some of these less coercive situations as being times when the women "gave into" sex they initially did not want but later enjoyed, responded out of a sense of duty, or chose to acquiesce because the partner's verbal or nonverbal behavior became overwhelming. These types of sexually coercive situations typically occurred in relatively happy, noncoercive partnerships and are in marked contrast to other women who described sexual coercion involving physical violence and chronic unwanted sex (Basile, 1999).

The health data also support a heterogeneous conceptualization of intimate partner violence because the different types were associated with different health problems. Only battering was associated with increased sexually transmitted disease, frequent urinary tract infections, gynecological problems, and role limitations, whereas frequency of sexual and physical assault were associated with increased smoking and with chronic pain. Increased stress and a decreased likelihood of receiving regular checkups were common among all three types of abused women. It is plausible that the excess chronic pain experienced by the assaulted women resulted from physical trauma to the body. It is interesting that it was the battered but not sexually assaulted women who were at greater risk, relative to nonabused women, for poor sexual health; it is possible that many battered women could be exposed to coercive sexual activity not defined by them as assault and/or had unprotected sex with partners who had sexually transmitted diseases.

Overall, our findings that intimate partner violence in one form or another was significantly associated with poor health is consistent with literature (Coker, Smith, Bethea, et al., 2000; Coker, David, Arias, Desai, Sanderson, Brandt, & Smith, under review; Freund, Bak, & Blackhall, 1996); however, in contrast to studies using clinical samples but not those using community samples (Plichta, 1996), abuse was not associated with increased health care visits. It is of some concern that abused women do not make more frequent visits to their health care providers because they have significantly more health problems than do nonabused women, many of them potentially treatable (e.g., sexually transmitted disease, menstrual problems, urinary tract infections, backache). Indeed, the infrequency of health care visits could be considered an additional "health problem" in this population. It may be that the abused women in our study had reduced access to health care visits as a result of their lower family incomes and single marital status. However, our sample was more highly educated and had higher income overall than other studies of abused women.

Of considerable importance is the finding that all three types of abused women were more likely than nonabused women to have lower perceived social support, although they had similar levels of weekly contact with family or friends. Specifically, abused women reported that their family and friends helped them less often, and they were able to rely less on these people to listen to them, give advice or information on what to do, care about them no matter what happened, tell them where they could get help, support their decisions, lend them a hand, or help them relax when they were under stress. Helping members of abused women's social networks be a support to their abused friends may be one important way to improve a community's response to abused women and to improve the health of abused women as a recent study found that, among abused women, those with better social support had better health status (Coker, Smith, McKeown, Bethea, & David, in press).

LIMITATIONS

Our ability to fully examine psychological battering was limited by the time frame of our study and by the items we used to measure physical and sexual assault, which were restricted to the past 12 months or the last 12 months of a woman's most recent relationship. We also only asked about the current or most recent former relationship so it is possible that we missed those women who had been assaulted within the past 12 months by another, now former, partner. Also, we did not investigate the various aggressive, controlling, and/or coercive tactics that were used by the women's partners to instill in the women the level of fear, vulnerability, and loss of control necessary to be classified as battered women.

Our study was also limited by the small sample size and relatively low response rate. The small sample size may mitigate against finding other differences among the women in our sample. Our sample was also limited to women between the ages of 18 and 45; this truncated distribution may well account for why battering and sexual assault were not associated with age. Finally, our sampling frame included only women who had registered to vote and whose address, as known to the election board, was correct. Our sample also underrepresented African American women: 14.8% of the women in our study were African American compared to 34% in the population. Thus, our sample may have also underrepresented women more likely to move and women of lower income. Our prevalence rates of intimate partner violence are therefore likely to be conservative when generalized to the larger population of reproductive-age women.

IMPLICATIONS FOR RESEARCH AND PRACTICE

Our data suggest that a single measurement instrument or screening tool cannot capture all aspects of abuse. Consequently, in some studies, women who are abused in ways not measured by the instrument could be misclassified as nonabused. This misclassification bias highlights the importance of including measures of different types of intimate partner violence whenever possible and, when not possible, of selecting the instrument that will identify the type of intimate partner violence of most concern to the study. Researchers thus need to be clear as to what types of abuse they are and are not measuring in the study. This study found, as have others (Coker et al., 2001), that the WEB Scale identified a higher proportion of all abused women than did items that asked about physical assault or sexual assault. Because it is the women's male partners who are perpetrating the abuse, our findings also indicate that a single instrument measuring intimate partner violence perpetration may misclassify perpetrators. In particular, instruments that measure physical assault perpetration will not identify those who perpetrate psychological battering or sexual assault; such men would likely be incorrectly classified as nonperpetrators.

Similarly, clinical screening tools that rely on indicators of physical or sexual assault will fail to identify as abused women those who are psychologically battered. This could lead to many battered women not being exposed to appropriate interventions. An additional consideration for intervention planning is that the women who experience the different types of intimate partner violence, as well as the men who perpetrate them, may be different in many as yet unknown ways. It is likely, therefore, that intervention and prevention strategies need to be broadly conceived or specifically tailored to address one type of intimate partner violence. Most of our intervention strategies and ways of working with abused women have been derived from decades of work with battered women. These may or may not be effective for women who are assaulted, physically or sexually, but are not battered. The critical need for effective strategies that prevent and intervene in all the different types of

intimate partner violence underscores the need for researchers to continue to explore the differences, as well as the similarities, among battering, physical assault, and sexual assault in intimate relationships.

APPENDIX
Women's Experience With Battering (WEB) Scale

Following are a number of statements that women have used to describe their relationships with their "male partners." Please read each statement and then circle the answer that best describes how much you agree or disagree in general with each one as a description of your relationship with your "partner." If you do not now have a partner, think about your last one. There are no right or wrong answers; just circle the number that seems to best describe how much you agree or disagree with it.

Description of How Your Partner Makes You Feel	*Agree Strongly*	*Agree Somewhat*	*Agree A Little*	*Disagree A Little*	*Disagree Somewhat*	*Disagree Strongly*
1. He makes me feel unsafe even in my own home.	1	2	3	4	5	6
2. I feel ashamed of the things he does to me.	1	2	3	4	5	6
3. I try not to rock the boat because I am afraid of what he might do.	1	2	3	4	5	6
4. I feel like I am programmed to react a certain way to him.	1	2	3	4	5	6
5. I feel like he keeps me prisoner.	1	2	3	4	5	6
6. He makes me feel like I have no control over my life, no power, no protection.	1	2	3	4	5	6
7. I hide the truth from others because I am afraid not to.	1	2	3	4	5	6
8. I feel owned and controlled by him.	1	2	3	4	5	6
9. He can scare me without laying a hand on me.	1	2	3	4	5	6
10. He has a look that goes straight through me and terrifies me.	1	2	3	4	5	6

Scoring: To score the WEB Scale, reverse score and then sum responses for the items. Range of scores is 10 to 60. Score >19 indicates battering.

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